# CSSE 132 – Introduction to Systems Programming
Rose-Hulman Institute of Technology

## Quiz 6 C Programming Basics

Name (Print):_____ RHIT Username:_____

1. Draw boxes to identify the following parts of this function: return type, input arguments, function name, function body.

```
int main(int argc, char** argv) {
  printf("this is awesome!");
  return 0;
}
```

2. Given that `int a = 2` and `int b = 5`, write the output of the following code (either a scalar value or boolean—note that booleans are represented by `int` in C):

   (a) `a * b`: [ ]

   (b) `b % a`: [ ]

   (c) `a > b`: [ ]

   (d) `a != b`: [ ]

   (e) `a && b`: [ ]

   (f) `a || b`: [ ]

3. Write down the size of the following data types in `C`.

   (a) `char` [ ]

   (b) `int` [ ]

   (c) `long` [ ]

   (d) `long long` [ ]

   (e) `float` [ ]

   (f) `double` [ ]

4. Fill in the blanks to complete the code to print the value of the variable `a` with the format as `"The value of a is *."`(Replace $*$ with the value of `a`)

```
____________   // import the necessary lib
void main(){
  int a = 5;
  printf(____________________________________,______);
}
```

5. What is a `char` in C?

   A `char` is a one-byte number that ranges from ☐ to ☐. By using the ASCII Table, the number is encoded/mapped to a specific ☐ (e.g., alphabetic letter, symbol, digit, etc) .

6. What is the screen output given the following code? (Assume the necessary libraries are already included)

```c
int a = 68;
char b = 'b';
printf("a = %c, b = %d", a, b); // note the format specifiers used
```

   The screen print out is: ☐

```c
char a = '9';
int b = 8;
printf("%c + %c = %d", a, b + 48, a - '0' + b);
```

   The screen print out is: ☐

7. Examine the following `C` code carefully and find the errors. The program attempts to call a `add` function to add two numbers and then verify the answer. If the answer is incorrect, it will print out correct answer. (HINT: 7 errors + 1 misused print format)

```c


add(int a, int b) {

  c = a + b;
  return c;
}

int main(){
  int x = 1
  int y = 2;
  int z = x + y;
  if (add(x, y) != z)
    printf("Wrong! The right answer is %c.\n",z);
  elif (z == 3){
    printf("Right\n");
  }
  # Ignore me. This is a comment.
  return 0;



```

8. **Reflection:** What is one thing from this topic that you found interesting, OR what is one question you are now curious to learn more about?